

NOTES ON THE JAPANESE SPECIES OF THE GENUS *PHORONCIDIA* (ARANEAE: THERIDIIDAE)

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Synopsis

YOSHIDA, Hajime (Entomological Laboratory, College of Agriculture, University of Osaka Prefecture, Sakai, Osaka 519, Japan): Notes on the Japanese species of the genus *Phoroncidia* (Araneae: Theridiidae). *Acta Arachnol.*, **28**: 45-51 (1979).

Two Japanese species, *Phoroncidia pilula* (KARSCH) and *P. sudabides* (BÖSENBERG et STRAND) are redescribed. The latter is transferred from *Theridion*. A new species, *P. ryukyuensis*, is described from the Ryukyu Archipelago.

The first Japanese species of the genus *Phoroncidia* was described by KARSCH in 1879 as *Sudabe pilula* and later it was transferred to *Theridion* and *Oronota*. It was finally confirmed in 1965 as belonging to the genus *Phoroncidia* by YAGINUMA. Recently, as a result of my examination, another species which had been known as *Theridion sudabides* was also recognized to belong to the genus *Phoroncidia*. And in addition, a new species of this genus was found by myself in some islands of the Ryukyu Archipelago. Here I wish to redescribe *P. pilula* and *P. sudabides*, and describe a newly found species of *Phoroncidia*.

Before going further, I wish to express my hearty thanks to Prof. T. YAGINUMA, Ohtemon-Gakuin University, for offering invaluable advice and to Mr. H. TANAKA, Sakai, for allowing me to use his collection.

Genus *Phoroncidia* WESTWOOD, 1835

Small theridiid spiders. Carapace with eye region projecting above clypeus

anteriorly. Legs short, the fourth leg longer than the first. Abdomen heavily sclerotized, of various shapes. A sclerotized ring surrounding spinnerets. Male palpus usually has a paracymbial hook on or near the edge of the cymbium.

Key to the Japanese Species of *Phoroncidia*

- 1a. Abdomen without a median dorsal hump, but with two pairs of dorsal humps *sudabides* (BÖS. et STR.)
- 1b. Abdomen with a median dorsal hump 2
- 2a. Abdomen with a pair of humps posteriorly *pilula* (KARSCH)
- 2b. Abdomen with sclerotized plates on sides in stead of a pair of humps ..
..... *ryukyuensis* n. sp.

Phoroncidia pilula (KARSCH)

(Figs. 1-3)

- Sudabe pilula* KARSCH, 1879. Verh. naturf. Ver. preuss. Rhein., 36: 63.
- Theridion pilula*: BÖSENBERG & STRAND, 1906. Abh. senck. naturf. Ges., 30: 146, fig. 268.-SAITO, 1941. Faun. Nipponica, 9(2-2): 179, fig. 204.
- Gasteracantha sagaënsis* BÖSENBERG et STRAND, 1906. Abh. senck. naturf. Ges., 30: 239, fig. 426.
- Ulesanis sagaënsis* KISHIDA, 1936. IN S. KOMATSU, Iconog. Aran. Jap., 1: 88.-SAITO, 1941. Faun. Nipponica, 9(2-2): 148, fig. 166.
- Oronota pilula*: YAGINUMA, 1956. Atypus, (11): 26.-YAGINUMA, 1960. Spiders Japan Col.: 34, fig. 44.-YAGINUMA, 1961. Atypus, (21): 25.-YAGINUMA, 1961. Revision Jap. Spiders: 15.-YAGINUMA, 1962. Spider Faun. Japan: 13.
- Phoroncidia pilula*: YAGINUMA, 1965. Acta arachnol., 19: 34.-YAGINUMA, 1968. Spiders Japan Col.: 34, fig. 44.-YAGINUMA, 1970. Bull. natn. Sci. Mus. Tokyo, 13: 648.-YAGINUMA, 1977. Acta arachnol., 27 (sp. no.): 377.

This species was described by KARSCH under the genus *Sudabe*.

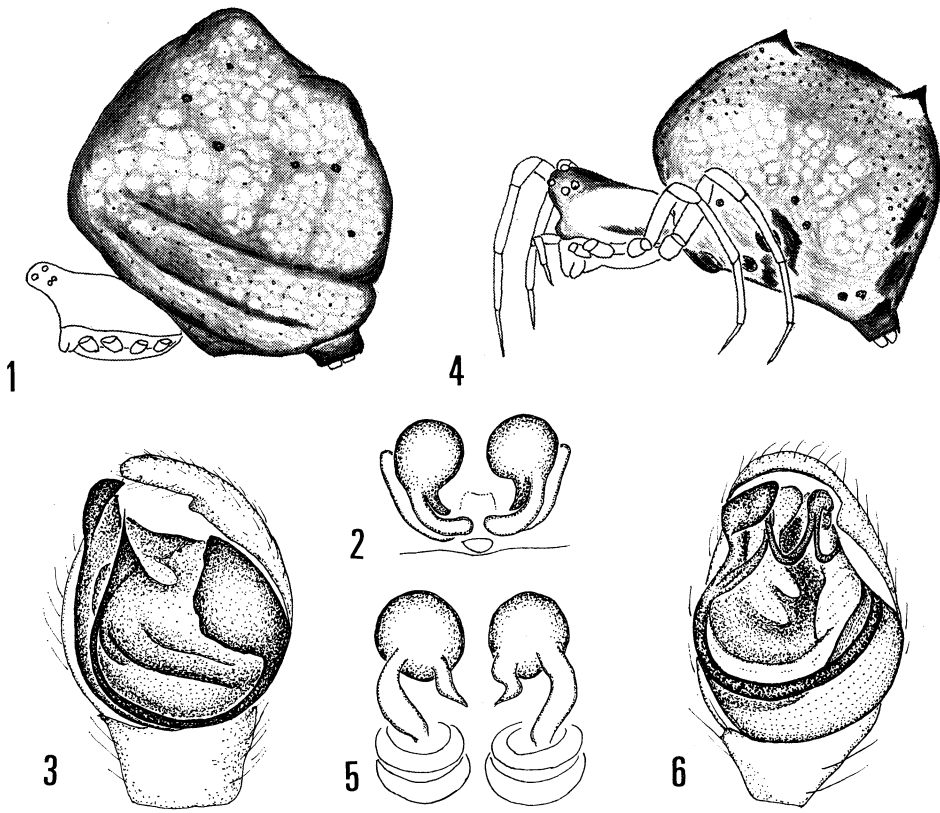
Misidentified species. A quite different species from a cave was identified with *Theridion pilula* by T. KOMATSU in 1940, but this cave spider is doubtlessly the present "*Nesticus brevipes* YAGINUMA" (YAGINUMA, 1970).

Female. Carapace and sternum dark brown. Legs brown, with indistinct dark rings at distal parts of segments. Abdomen greyish brown; sclerotized area dark brown. Carapace with eye region projecting. Anterior median eyes slightly larger than others. Sternum granulated, and truncated between fourth coxae with tubercles pointing towards sternum. Abdomen with a median dorsal hump and a pair of posterior humps. Total length, 1.90 mm. Carapace,

0.70 mm long, 0.60 mm wide. First patella and tibia, 0.40 mm ; second, 0.40 mm ; third, 0.35 mm. Fourth femur, 0.50 mm ; patella and tibia, 0.40 mm ; metatarsus, 0.30 mm ; tarsus, 0.30 mm.

Male. Coloration is similar to that of female. Abdomen is smaller and harder than that of female. Humps are relatively distinct. Total length, 1.60 mm. Carapace, 0.65 mm long, 0.60 mm wide. First patella and tibia, 0.40 mm ; second, 0.40 mm ; third, 0.40 mm. Fourth patella and tibia, 0.50 mm ; metatarsus, 0.25 mm ; tarsus, 0.25 mm.

Material Examined. Mt. Iwawaki, Kawachinagano, Osaka Pref., 18-X-1976, 1♂, H. YOSHIDA, 20-V-1978, 1♀, H. YOSHIDA, 25-VI-1978, 1♀, H. YOSHIDA.



Figs. 1-3. *Phoroncidia pilula* (KARSCH)

1,2. Female. 1. Lateral view. 2. Genitalia, dorsal view. 3. Male palpus, ventral view.

Figs. 4-6. *Phoroncidia sudabides* (BÖSENBERG et STRAND)

4,5. Female. 4. Lateral view. 5. Genitalia, dorsal view. 6. Male palpus, ventral view.

Kimi-tôge, Hashimoto, Wakayama Pref., 9-IV-1978, 1♂, H. YOSHIDA. Mt. Tachibana, Fukuoka, Fukuoka Pref., 2-V-1978, 1♂, H. YOSHIDA.

Distribution. Honshu, Shikoku, Kyushu, and Tsushima Islands.

Phoroncidia sudabides (BÖSENBERG et STRAND) n. comb.

(Figs. 4-6)

Theridion sudabides BÖSENBERG & STRAND, 1906. Abh. senck. naturf. Ges., 30: 145, fig. 186.-YAGINUMA, 1960. Spiders Japan Col.: 36, fig. 54.-YAGINUMA, 1962. Spider Faun. Japan: 14.-YAGINUMA, 1968. Spiders Japan Col.: 36, fig. 54.-YAGINUMA, 1970. Bull. natn. Sci. Mus. Tokyo, 13: 649.-YAGINUMA, 1977. Acta arachnol., 27(sp. no.): 378.

Theridion subabides (lapsus calami): SAITO, 1942. Faun. Nipponica, 9(2-2): 191, fig. 244.

Though this species is known as *Theridion sudabides*, the collecting records are extremely scarce. Concerning the taxonomical position of the species no one reexamined it until recently because of the scarcity of individuals. Recently, however, I had an opportunity to examine some specimens preserved in the collection of Mr. H. TANAKA, and I confirmed that the species should be transferred from *Theridion* to *Phoroncidia*.

Female. Carapace yellowish white, with a median longitudinal black band and a narrow black border; eye area black. Sternum yellowish white, with a darker border. Legs greyish yellow, with some black spots. Abdomen greyish yellow, with black patches on venter; sclerotized area light brown. Dorsum of abdomen with two pairs of tubercles whose tops are black. A sclerotized ring around spinnerets. Eyes subequal in size. Anterior median eyes their diameter apart, one-half diameter from laterals. Posterior median eyes a little more than their diameter apart, one-half diameter from laterals. Lateral eyes almost touching. Total length, 2.35 mm. Carapace, 0.85 mm long, 0.75 mm wide. First patella and tibia, 0.75 mm; second, 0.70 mm; third, 0.60 mm. Fourth femur, 0.85 mm; patella and tibia, 0.75 mm; metatarsus, 0.45 mm; tarsus, 0.45 mm.

Male. Coloration and structure similar to those of female. Total length, 1.80 mm. Carapace, 0.65 mm long, 0.70 mm wide. First patella and tibia, 0.75 mm; second, 0.70 mm; third, 0.60 mm. Fourth femur, 0.85 mm; patella and tibia, 0.75 mm; metatarsus, 0.45 mm; tarsus, 0.45 mm.

Material Examined. Shironoyama, Sakai Osaka Pref., 3-VII-1969, 2♀, H. TANAKA, 9-V-1970, 1♂, H. TANAKA.

Distribution. Honshu, Shikoku, Kyushu and Okinawa Islands.

Remarks. The points suggesting transfer to *Phoroncidia* are summarized as follow: 1) Carapace with eye region projecting anteriorly. 2) Abdomen with two pairs of humps and many sclerotized spots. 3) Spinnerets surrounded by a sclerotized ring.

***Phoroncidea ryukyuensis* n. sp.**

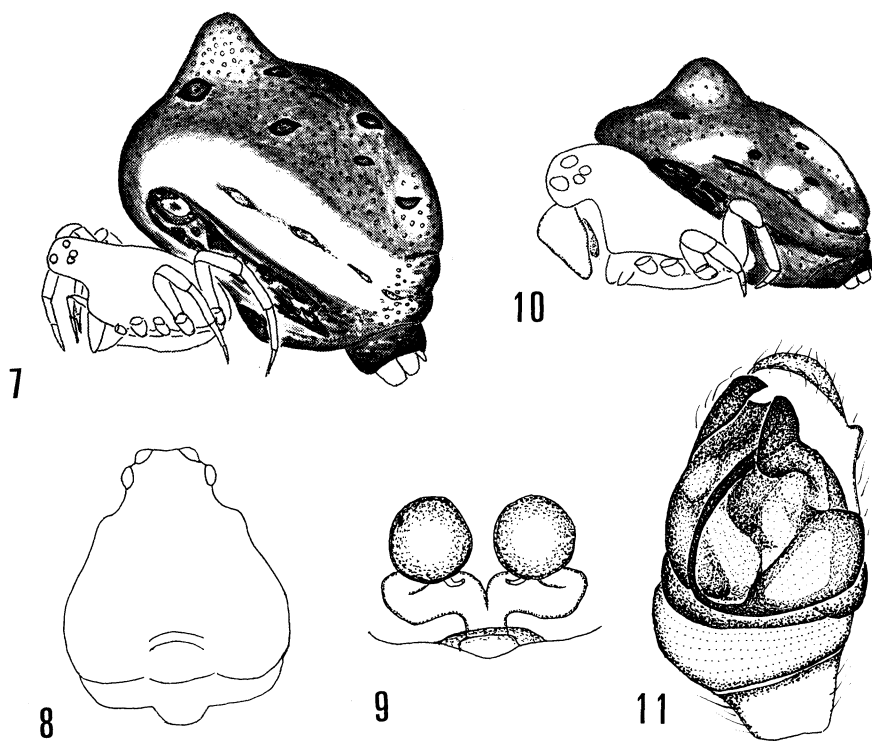
(Figs. 7-11)

Type-series. Holotype (♀) from Amitori, Iriomote Island, Okinawa Prefecture, 17-III-1977, H. YOSHIDA, and paratype (♂) from Kabira, Ishigaki Island, Okinawa Prefecture, 15-III-1977, H. YOSHIDA, are deposited in the collection of the Arachnological Society of East Asia, Ohtemon-Gakuin University, Ibaraki, Osaka.

The other materials. Naze, Amami-Oshima Is., Kagoshima Pref., 27-III-1978, 2♀, 1♂, H. YOSHIDA. Mt. Yuwan-dake, Amami-Oshima Is., Kagoshima Pref., 31-III-1978, 1♀, H. YOSHIDA. Mt. Inogawa-dake, Tokunoshima Is., Kagoshima Pref., 29-III-1978, 1♀, H. YOSHIDA. Kabira, Ishigaki Is., Okinawa Pref., 15-III-1977, 3♂, H. YOSHIDA, 3-VIII-1978, 1♂, H. YOSHIDA. Amitori, Iriomote Is., Okinawa Pref., 17-III-1977, 3♀, 2♀y, H. YOSHIDA.

Female (holotype). Carapace dark brown, with posterior central portion lighter brown. Sternum light brown, with a narrow darker border. Legs light brown. Abdomen brown, with a white band on sides; sclerotized area dark brown. Carapace with eye region projecting, and with tubercles on sides. Anterior median eyes their diameter apart, one-third diameter from laterals. Posterior median eyes slightly larger than others, their diameter apart and one-half diameter from laterals. Lateral eyes almost touching. Sternum truncated between fourth coxae with tubercles pointing towards sternum. Abdomen with a median dorsal hump and sclerotized plates on sides. Epigastric area heavily sclerotized. Spinnerets surrounded by a sclerotized ring. Total length, 2.10 mm. Carapace, 0.95 mm long, 0.70 mm wide. First patella and tibia, 0.45 mm; second, 0.40 mm; third, 0.35 mm. Fourth femur, 0.65 mm; patella and tibia, 0.60 mm; metatarsus, 0.30 mm; tarsus, 0.30 mm.

Male (paratype). Coloration and structure are similar to those of female except for the following: Carapace without tubercles on sides. Anterior median eyes largest; followed by posterior medians. Abdomen lower than that



Figs. 7-11. *Phoroncidia ryukyuensis* n. sp.

7-9. Female. 7. Lateral view. 8. Carapace, dorsal view. 9. Genitalia, dorsal view.
10,11. Male. 10. Lateral view. 11. Palpus, ventral view.

of female, and dark brown with four white flecks on each sides and a large one on dorsum posteriorly. Palpus with a paracymbial hook on the edge of cymbium. Palpal organ as shown in Fig. 11. Total length, 2.00 mm. Carapace, 1.05 mm long, 0.65 mm wide. First patella and tibia, 0.45 mm; second, 0.40 mm; third, 0.40 mm. Fourth femur, 0.55 mm; patella and tibia, 0.55 mm; metatarsus, 0.30 mm; tarsus, 0.30 mm.

Variation. Coloration of the abdomen is variable: A specimen from Tokunoshima has almost white abdomen; one from Amami-Oshima, dark brown; another, immature specimen from Iriomote, pink.

Remarks. This species is distinguished from many *Phoroncidia* species from the Oriental region, by the following characteristics: 1) Carapace of the female with tubercles on sides. 2) Abdomen with a median dorsal hump and sclerotized

plates on sides.

Notes. The specific name is derived from the Ryukyu Archipelago.

摘 要

吉田哉 (大阪府立大学農学部昆虫学教室, 〒591 堺市百舌鳥梅町4丁804): 日本産の *Phoroncidia* ツクネグモ属 (ヒメグモ科) について。

日本ではこれまでツクネグモ属として, *P. pilula* (KARSCH) ツクネグモ 1 種のみが記録されている。しかし, *Theridion sudabides* BÖSENBERG et STRAND ヨツコブヒメグモはツクネグモ属に転属すべである。これら 2 既知種の再記載と同時に, 琉球列島に産する 1 新種, *P. ryukyuensis* n. sp. リュウキュウツクネグモ (新称) を記載した。

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